AMERICAN BEE JOURNAL.

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For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL: We are really afraid that for once we shall be unable to get the one barrel from each ten colonies, but yet we have faith that it could have been done had our queens *all* been as prolific as some of them were. Accordingly we commenced in July to destroy all queens not considered up to the standard, giving the stock queens cells from choice parentage; since then we have been rearing extra queens in the upper stories, interposing a heavy sheet of manilla paper between the two, besides the quilt to prevent accidents should the bees gnaw through the latter. With the L. hives we make the upper entrance on the roof of the portico. With the "Simplicity"—by the way, kind readers, please allow us to stop long enough to thank friend T. S. on page 36 for his setting the matter so that none may get erroneous ideas from the term "dollar hive." He is in the main right, but the hive without frames was often ordered and sold for $1.00, as those having Langstroth hives could simply hang a set of frames, combs, bees, and all in them, and see whether they liked them without farther expense. If they approved them they had a complete pattern to work by; for $1.00 paid for all there was about the "Simplicity Hive," different from the Langstroth," and the same may be said of all other hives used two story. By the way Mr. Editor, we were somewhat annoyed to find that our advertisement in two numbers, read "Hives ready to *mail*" for 90c. It seems every one did not know this should have read *nail*. If "Uncle Sam" will carry queens by mail, we won't ask him to carry hives. We, too, wrote to the P. N. G. with all the eloquence we could master to try and set him right about bees by mail, but he only replied by copy of the decision, saying he had seen no reason for revoking his decision. We will most heartily join with our old friend Alley in any thing that may facilitate giving the people Italian queens at less expense. Several P. M's say they will send them at any rate until further orders, and we really hope the proper authorities will see that justice be done this branch of rural industry. There! Now, we'll try and tell, that—to raise queens in the second story of S. hives, we put an extra door step on the upper half, and it is our opinion that during dull times for honey, especially in the fall and with stocks that have not swarmed, a fine queen could be raised every two weeks as well as not. If you think no one will "pick at it," Mr. Editor, you might state that we sell such queens unwarranted for one dollar each, and orders are on hand now for more than we can probably raise. Is not there a chance here for many others to make their heavy colonies yield quite an income after honey has failed, and at the same time "do good" by disseminating Italians cheaply?

We are pained to see Dadant overhaul Adair so roughly. While we agree with Dadant in the main, in regard to "Progressive Bee Culture," we fear his article would not have been written had not Adair attacked imported queens. It seems the two have been friends, can they not remain so even while criticising. Adair *we think* has committed some grave blunders; Mrs. Tupper certainly did one or more, and M. Quinby and others have done their share. If one intimates that the extractor kills brood; and another that frames in part closed or all around can be handled with the facility of open, suspended ones; or that any particular hive will give box honey with the certainty, and in quantities equal to extracted; public good, or the good of the masses demand that the matter be corrected, not by assertions, but by facts, and these should be given promptly and fearlessly and *never* from spite or revenge.

We once read a letter accusing us of making an attack on a man in "cold blood," *i. e.* he had never wronged *us*. Had he done so it would have been revenge, hence excusable. It was his hive we objected to, not the man. Mr. Gallup speaks of a hive three feet high; we should not like this at all, nor should we like a frame 11 inches square, or about that, as Mr. Gallup's is.

We think with Adair that the width of frames should always exceed the depth. However, suppose we had an order to make a hive of Gallup frames and we did have such an order from Prof. Cook, of Michigan, Agricultural College. Three stories of eight frames each would be very bad; and the whole twenty-four spread horizontally in a hive three feet long would take much room, much lumber, and must *all* be carried into winter quarters, or none, supposing it as good economy of brooding space for bees. We decided on two Simplicity hives with 12 frames each as best, all things considered. Do not most of our readers agree with us. Were it not for wishing to take only one-half the combs into winter quarters, we might have placed two stories of such tall frames side by side *a la* Gallup's "twin hive," or has he abandoned that form? Mr. G.'s locality might make a difference, yet he says they get almost no box honey. (See page 24.)

That don't agree with Adair.

The new idea hive (four feet long is new certainly), works very well, with suspended frames, of course; we are watching some belonging to a friend and they prove very convenient for the extractor. If bees could be wintered in them safely out of doors, and without too great additional consumption of food, we think they might be considerably used.

NOVICE.

P. S.—We have this season, for the first time, a queen that has so far, *invariably* produced duplicates of herself, finely marked yellow queens. She was a present from R. M. Argo, Lowell, Ky.

[For the American Bee Journal.]

Our Maiden Swarm.

"Is there any danger of their swarming this season?" asked Nellie, one day, as we were wondering over the rapidity with which comb-building and brood-rearing went on in our pet colony, No. 3. (The colony of May 27th—the colony which *might have been* a "natural" swarm.)

"I think not," I replied. "Langstroth says that 'a first swarm will sometimes swarm again, about a month after it is hived; but in Northern climates this is a rare occurrence.' Now, 'rare occurrences' don't happen with beginners like us; they *never* do."

"Still," suggested Nellie, "we may as well keep a little watch of their proceedings."

"My dear," I responded severely, (I always say "my dear" to Nellie, when I wish to imply reproof), "do you suppose that I shall allow *another* swarm to issue this season?"

Nellie did not reply, and I suspected her of biting her lips to repress a smile. After a moment she said inquiringly:

"Such a swarm would be called a 'maiden swarm—*why?*"

"Perhaps it is apt to be rather *slender*," I guessed.

"Which means that you know no more about it than I do."

"Yes."

About July 4th the daily supply of honey from the fields did not equal the daily demand; and from this time until July 13th we were obliged to contribute to the support of four of our five colonies. Then the basswood harvest began. Four days later we examined No. 3, and finding it very strong in numbers, with but little to do below, (there was so much brood as to leave little room for honey), we gave them above a box containing two rows of nice little frames. The pleasure it gave us to see the bees, with little delay, go up and take possession, was *intense*. No other word expresses it. What a comfort and a joy was this colony! Always at work—never sitting out and filling us with apprehensions of possible leave-taking, as did the bees at another hive.

Never were they busier than on the morning of July 22d. I peeped into the top, and raised the covering from the box of little frames. Bees at all the openings, quietly peered up at me—all, seemingly, contented and happy; and I walked into the house, scattering smiles in all directions so lavishly, that once or twice I caught Nellie looking at me somewhat apprehensively—perhaps fearing that, if spent at that rate, the supply would soon become exhausted.

I think I smiled no more (that day) after one p. m.; about which time Richard called to me.

"Cyula, your bees are swarming!" and hurrying to the door, I saw, to my grief and vexation, that it was our pet colony No. 3.

I don't know much about the average size of 'natural' swarms, yet I am confident that this might have been called enormous, anywhere. At any rate, it almost demolished the top of one of our little apple trees.

"And you call *that* a 'maiden' swarm!" said Nellie, somewhat sarcastically, as we stood looking at the great brown mass. I was obliged to confess that it *did* have rather more of a grandmotherly appearance.

The hiving was not difficult; but it was a somewhat tedious operation. The heat was oppressive; but Nellie kindly held an umbrella over the cluster to shield it from the sun, until the greater part had been coaxed or driven into the hive.

We gave them all the space below, (ten twelve-inch-square frames); for evidently they needed it. At the old stand we found queen-cells but just begun, and a comparatively small stock of bees. But there was so much capped brood that we concluded to leave matters as they were. Only we lamented bitterly over our blighted hope of surplus honey in little frames. Sorrowfully we took them off;—some filled and ready to cap; others half filled; others with only a square inch or two of snowy comb. How-

ever, we took from the lower story three days later (despite the brood, and without injuring it), seventeen pounds of very nice basswood honey.

For four days our 'maiden' swarm worked at comb-building as never had *our* bees before. As the beautiful work went on, we grew reconciled to our loss of honey, and remembered that, after all, bees and worker-comb, instead of honey, had been our aim for *this* season; why then should we complain that our faithful little laborers had thus effectually carried out our own plans?

On the afternoon of the fourth day our equanimity was aggravatingly upset. Without warning, our new colony once more rushed forth in a body, and consternation and dismay filled our hearts, (for we thought, *surely* they will go off to the woods, *now*,) until they began to congregate upon a little tree, a rod or so from the hive.

"They are very good and considerate in their choice of resting places," I remarked.

"Perhaps you don't notice," responded Nellie, "that it is my little apricot tree they have chosen. Without doubt it will be entirely ruined!"

"Never mind," I said cheerily. (It is *well* to be cheerful in contemplating the sorrows of a friend.) It could not long survive our cold winters—better that it thus worthily perish now."

Looking into the deserted hive, we found eggs and honey with as much comb as our one artificial swarm of a year ago would have taken three weeks to build.

"It is evident that they left because they were wise enough to foresee that, with this space fully furnished with comb, honey and brood, there would not be enough room left for themselves." This was the conclusion I finally reached.

"Well,—what are you going to do about it?" asked Nellie.

"Give them room above; besides giving some of the bees to the other hives. "Yet, after all, I shall not feel at ease respecting them. If"—I said, with sudden emphasis—"we only *could* find the queen!"

"Something like 'looking for a needle in a needle in a hay-stack,' I fancy," said Nellie; "but what would happen in that case?"

"I believe—yes, I *do* believe that I would cut off her wings!"

"*Would* you?" said Nellie, a little incredulously.

We had put our hive, with entrance enlarged, in close proximity to the swarm, and had already induced quite a number to enter, when, suddenly, I saw, and pointed out to Nellie, the queen. Instantly, Nellie's fingers went down among the bees in the place indicated, and after a few moments of breathless suspense, she exclaimed, starting toward the house,

"Come quick, Cyula! Find your scissors!"

I followed, with (I confess it) a somewhat reluctant step. In all *im*possible places I began to search for those scissors, saying to myself meantime, oh, I cannot do it—I *cannot!*"

"Don't you think, Nellie," I queried, "that our scissors are rather clumsy for such work!"

"Those you have in your hand—the *shears*—yes! But the little ones,—well, they're not as good as those we see advertised for this special use, doubtless—still, I guess they'll do. Be quick, Cyula! She is growing impatient—she is biting my hand."

"Put her under a tumbler," I said, glad of a moment's respite, and officiously aiding in this operation.

Nellie now began a systematic search for the scissors, and I, pretending to aid in this, wandered off into the kitchen, repeating to myself "It is just impossible—I *can't* do it!"

A minute later, Nellie found me standing in the door-way, with my eyes vacantly fixed upon the bowed-down apricot tree.

"I have found the scissors," she said, with an inquiring, and somewhat suspicious glance. "Are you ready!"

"Ready for execution?—yes!" I replied, as I meekly turned to follow her.

"No," she laughingly answered, *your* wings havn't *begun* sprouting yet, Cyula. I'll clip them with pleasure, whenever they do, be assured. But *are* you ready, either to hold Rebecca" (all our queens have names) "while I clip her wings, or shall I hold her while you do the deed? Surely you don't mean to say that you are willing to risk her going off with the swarm to-morrow?"

"No,—of course not," I replied, summoning all my resolution. "Did not *I* propose clipping her wings? But, if you don't care, I think I'll let you use the scissors."

"Very well," said Nellie.

I fear that I am exposing myself to the lasting scorn of all *brother* bee-keepers; but I must confess that when I essayed to hold her majesty, "gently but firmly," I found my hands trembling to such a degree, as to make the situation for her a somewhat dangerous one.

"You'll have to take the scissors after all, Cyula," said Nellie. "Now, then,"—she said, as for a moment she held her still, with the poor little folded wings within reach of the scissor points.

"But I wish to cut but *one* wing," I remonstrated.

"I can't easily separate them. It will do just as well—will it not?"

The next instant (I hardly know how I did it) the shining points had met, and the tiny, gauzy fragments had dropped to the floor.

As I looked at her now I was overwhelmed with contrition and remorse. I felt as David may have felt when he had cut off the skirts of Saul.

"I don't think it hurt her much," remarked Nellie, somewhat commiseratingly.

"Perhaps not," physically speaking; "but only look at her! Think of the *indignity*—of the injury to her feelings!"

"Well, she is very quiet about it," said Nellie. "She has stopped buzzing entirely."

"'Stopped buzzing.' What are you thinking of? I should think she well might without wings," I indignantly answered.

Whereupon Nellie laughed, partly at herself and partly at me, and then, with composure somewhat restored, we went back to our work. A partially detached branch, to which a considerable number of bees were clinging, we cut off; and proceeded to shake off the bees in detachments at the other hives where they were cordially enough received. But the greater part, with their poor, maimed queen, were put back in their own hive and returned to their stand.

Next day, about ten a. m., our wilful 'maiden' swarm again came forth, but this time we were not greatly surprised, and of course, under the circumstances, were not greatly alarmed. Nellie inquired if I was very sorry, *now*, that Rebecca had no wings.

Her we found at the verge of the alighting board, and secured, until the bees, who scattered themselves far and near throughout the clearing, began to return, when we allowed her to go in among them.

This ends—we are confident that it *ends* the story of our swarming experiences for *this* season.

CYULA LINSWIK.

[For the American Bee Journal]

Letter From Kansas.

EDITOR JOURNAL.—We have to report a poor season here up to this writing: even worse than last year, which was the worst we have had for a number of years. There is time yet, however, for bees to lay up a good supply for the winter, and a reasonable surplus to all stocks that are strong in numbers. Some seasons we have known large quantities of honey gathered in October. We never expect any surplus here before August and September. The summer months, as a general thing, are too hot and dry for the bees to gather more than a living.

Are ventilators a humbug? They are unless you know how to make them so the bees will not gum the wire cloth over and close them. We find that they are very convenient during the hot summer months when the bees are compelled to leave the hive unless they are ventilated and cluster on the outside. Now we would like to tell Novice how to make a ventilator that the bees will not close. We make them by putting an inch hole in the rear of the hive near the top, opposite the entrance, and put the wire cloth on the outside of the hive, just let in enough so that a button will cover the hole without rubbing on the wire. We have had ventilators of this kind in use several years and none of them has ever been closed in the least, with gum by the bees. But when we started out in the ventilator business we put the cloth on the inside and in every case it was closed up as soon as the bees reached it.

We have got one idea from Novice that was valuable to us, and we are willing that he should know how to make a ventilator that is not a humbug.

N. CAMERON.

Lawrence, Kan., Aug. 11, 1873.

[For the American Bee Journal.]

Bees by Mail.

MR. EDITOR:—"Bees by mail" is a question of importance to queen raisers. How are they to convince the Postmaster General that his decision is unjust, and obtain a favorable ruling from him? We submit the following:

That you, Mr. Editor, should publish in your Journal the form of a petition to be sent to the Postmaster General. That the other bee journals be asked to copy it, and that queen raisers be requested to send or bring these petitions to the next meeting of the N. A. B. Society with all the signers they may be able to obtain, and especially the signatures of their postmasters, and these petitions, together with one from the N. A. B. Society, and a sample mailing box be sent to the P. M. G. Something of this kind may secure the mails to bee-keepers. A little prompt action on the part of those interested will accomplish this before another season comes.

H. C. COWAN.

Oxford, Ohio, Aug. 12, 1873.

BEE-STINGS.—A correspondent of the *Gardener's Magazine* writes as follows: "On the 15th of April last, a young man, employed near bees, had the misfortune of being stung. No remedy being near at hand, I remembered Mr. Gordon's note on the cure of bee-stings, at page 461 of the *Gardener's Magazine* for 1872. I recommended him to apply the common soil to the wound, as described by Mr. Gordon, and it immediately relieved the pain and prevented the swelling. Such a receipt is of more value than gold, to all who have anything to do with bees. I formerly used common blue for bee-stings, but common soil is preferable."

IN a word, if you desire to have your bees thrive, and prosper, keep them well from wind and wet, heat and cold, destroy their enemies; and let them enjoy a sufficiency of food gotten by their industry; and if their be a want in some, timely supply them, and doubt not of, by God's blessing on your endeavors, the increase and prosperity of your bees.

PURCHAS.

[Translated from the Bienenzeitung.]

Extracts From the Proceedings of the German Bee-Keepers' Convention, Held at Latzburg, Sept. 10, 11 and 12, 1872.

[CONTINUED FROM LAST NUMBER.]

The Production of Wax is Therefore a Secret of the Bee.

A second question is, whether the wax is made out of the honey, out of the saccharine matter of the nectar, or out of that mixed with pollen.

The observations which Huber, Grundlach, Dumas, and Milne-Edward have made concerning the production of wax have demonstrated that only by honey feeding will the bees produce wax. The bee-keepers have also demonstrated that the production of wax only continues for a certain time. Baron von Berelepsch says that the bees will for from sixteen to eighteen days continue building and rearing brood, when fed upon honey alone, although owing to the long confinement many dead bees with swollen abdomens lie on the floor beneath. The death rate increases from day to day, the most of the bees becoming weak and enervated.

Prof. Voit, in Munich, with the help of these observations and his theory concerning the production of fat as developed in his essay, "Concerning the Production of Fat in Animal Bodies," undertakes to prove that bees do not produce the wax out of hydrated carbon.

Voit, in his essay, proceeds thus: "Beautifully does Berlepsch show the influence of albumenous holding pollen upon the production of wax. In hive No. 1 he places combs filled with pollen, weighing 1,315 gramms, and six bars with 66 gramms of wax foundations. In stock No. 2, he placed empty combs and likewise six frames with 66 gramms wax foundations. The bees of each stock weighed 1,025 gramms, and had 2,338 gramms honey. After ten days the combs were taken out and examined to see how much new wax appeared to have been made. The combs of stock No. 2 weighed, including the honey, 1,118 gramms more than the wax foundations, and without the honey 51 gramms more, hence it appears that the increase of wax was 51 gramms, and that too with honey for their only food; there has then been absorbed in the body of the bees 1,272 gramms, and 1,066 gramms placed in the combs. The combs in hive No. 1 weigh, together with the inclosed honey, 1,049 gramms more than the wax foundations, and without honey, 84 gramms, hence the wax amounts to 84 gramms; in the combs are 965 gramms honey deposited, and in the body of the bees 1,257 gramms honey, and 117 gramms of honey used. This 117 gramms pollen supplied the 33 gramms of wax, over that obtained from feeding pure honey. This conclusion need not awaken any wonder unless judged by preconceived ideas. When we believe that wax is the product of the body of the bee it is very clear that any cause injuring the health of the bee will affect the supply of the wax; hence the exclusion of nitrogenous food. With honey alone the bee sickens; with nitrogenous food, however, they remain healthy and maintain the working energy of the bee, but with honey alone the 1,032 gramms of bees produced 51 gramms wax; when one understands that 45 parts of wax can be produced from 100 parts of dried albumen, he will easily comprehend that 1,052 gramms bees had to produce 455 gramms albumen in its natural state containing 75 per cent. water), and to furnish this material for the wax building, that had to produce 40 per cent. of fluid albumen from their bodies, thus diminishing their bodily weight that much. This is rather improbable.

According to Voit in the above experiment, the 117 gramms pollen, representing albumen, supplies the 33 gramms wax. But from my observations, the pollen gathered by the bees and placed in the cells contains but two, at the highest, but three per cent. nitrogen together with from 12.8 to 19.2 per cent. of albumen. Voit divides 100 gramms albumen in 23.5 urea, 51.4 fat, or 46.8 unc acid, and 46.7 fat; consequently according to my analysis the known quantity of albumen in 100 gramms of pollen would be only from 6.5 to 9.8 gramms fat, or from 5.7 to 8.9 gramms fat; just in such proportion as would allow 100 gramms albumen to contain 51.4 or 46.7 gramms of fat; in 100 gramms pollen there may be 7.6 to 11.4 gramms fat or from 6.9 to 19.4 gramms fat, and less wax, since the quantity of carbon in wax is usually higher than that in the fat; the quantity of carbon in 94 gramms of wax equals that in 100 parts of fat, also 6.9 fat, 6.5 wax, and 10.4 fat, 9.7 wax.

There is no possibility hence, that the 33 gramms of wax was supplied by the albumen of the pollen, since 117 gramms pollen are not 117 gramms albumen.

This interesting investigation does not then prove that the bees produce wax from the albumen of the pollen; one sees that the quantity of albumen in pollen will fall far short of what is needed to supply a large quantity of wax. The bees must eat pollen out of all proportions to produce wax rrom the albumen alone. The objection that the pollen used by Berlepsch has not been analyzed so as to obtain the quantity of nitrogenous matter contained in it, can have no force against my conclusions, for even analysis of pollen gathered by the bees show very slight variations from each other.

We can hence say,

2. *That wax is produced chiefly by bees from the saccharine matter they gather, and is continued only by the use of nitrogenous food.*

II.

How is it now with the honey.

Is the honey placed in the cells by the bees and that sucked from the flowers identical? Or is the latter chemically changed in the body of the bee?

This question cannot but be of great interest to the practical bee-keeper. At present I am not in a position to answer it, but I will explain to you the process by which I hope to solve the question.

There is, as far as my knowledge goes, but one chemically notice of this question: that made by Kemper and Kraut, and they do not solve the question. Bee-keepers, it is true, have tried experiments which appear to show that the bees only gather from the flowers and carry it to the cells without any change. The acceptance of the fact that the honey gathered by the bees undergoes a chemical change in its passage through the organs of the bee, is readily given, when the facts discovered by my researches into the nature of pollen show that the mingling of the pure saliva of the bee with the albumen of the pollen is changed into peptone. It is readily to be seen that, as illustrated by Fischer, the more than ordinarily developed saliva glands perform the largest part of the digestion of the bee, and especially the changing of albumen into peptone, which is a digested product of albumen not found in nature. When the pollen brought in by the bees is mingled with saliva, and such a process or digestion takes place, why should it be supposed that the nectar, gathered, swallowed and again ejected should escape any change.

This, it is well known, is a much disputed question. Each bee-keeper has his own idea about it, and yet scientific investigation, especially chemical experiments, can solve it. I hope that these questions will be solved theoretically and practically by the able bee-keeper, Herr Vogel, of Lehmanshofel, whom I cannot sufficiently thank for his wonderful perseverance, untiring counsel, and the noble experiments instituted by him Before I commence explaining these experiments I would say that the pure honey I used in the experiments contained no nitrogen. The different species of honey, obtained from Herr Vogel for experimental purposes, proved itself free from nitrogen, should there be nitrogen in any species of the honey, so originates by the mingling of this honey, an impurity. Pure honey comes solely from sugar, and a very small quantity of aromatic matter, which give to the several kinds of honey their specific character.

According to the plan of Mehring, malt food is prepared, and in this the quantity of nitrogen is fixed. This malt food I sent to Herr Vogel to feed the bees with. The honey obtained from this food must be tested for nitrogen. Should this honey, which I call "malt honey," be free from nitrogen, or contain a very small quantity, then is this malt food, which is substituted for the nectar of the flowers, changed by the organs of the bee, and has undergone a chemical change, since the bees cannot separate in the malt food the nitrogenous substance from the hydrated carbon in a mechanical way—as one separates the chaff from the wheat. The organs of the bees have, therefore, worked upon the malt food, having wholly or partly digested the albuminous substance and ejected the hydro-carbon as honey. As, in my opinion, the bees partially digest the malt-food, in like manner will they treat the nectar, which usually contains some pollen. In the one case we obtain malt honey, in the other linden and other species of honey, according as the nectar has been gathered from the linden, apples, etc. The malt honey differs in no respect from other honey, except in the aroma, i. e., as the linden blossom, and apple blossom, etc.

Malt honey is not malt food lacking nitrogenous matter, but it is honey, that is: the existing hydro-carbon (malt sugar and malt dextrine) are changed by the bees into honey sugar. Man cannot think to accomplish this result without the aid of bees.

It is as little possible to make honey from the gathered nectar, to make the separation of the species of sugar from the albuminous matter, which is united with the nectar; this change must take place in the body of the bee. We can, through the intervention of the bee, as before mentioned, prepare an artificial honey from malt food, which is only distinguised from natural honey by its maltish aroma.

Besides, this food of Mehring is by all held useful as a means of nourishing the bee, as well as for the preparation of honey, and hence will be much used in districts poor in honey-yielding blossom.

The results of my researches concerning artificial honey will shortly be published in the *Bienenzeitung*.

DR. W. VON SCHNEIDER.

St. Petersburg, Aug. 6, 1872.

After having read the above communication Prof. Siebolt read to the Association a lengthy and able essay, explaining the results of his investigations into the glandular system of the bee, of which we are here able to give but a brief abstract:

"From the foregoing observations I dare not conceal the fact, that a doubt has been started in my mind, whether the difference between nursing and honey-gathering bees consists only in their age, as has heretofore been supposed, but also in this, that the young bees are better fitted than the old ones for preparing the food for the larvæ, owing to their stronger and more powerfully developed glandular system, since it does not admit of a doubt that these glands play a very important part in the preparation of the food for the brood.

What range these investigations, relative to the glandular system of the bees first brought to notice by Fischer, and through ignorance neglected by the bee-keeper, will have, is readily seen not only in the preparation of the food for the brood, but also in the honey gathered and also in the working of the wax, which the bees use in building their combs. Does one consider that the brood bees take the wax scales, sweated as it were from their body, and, by chewing, reduce it to a pliable adhesive condition, he will readily understand that through this chewing and intermingling of the secretions of the mouth, the wax will undergo some change; I am firmly of the belief that a chemical analysis will show a difference in the elements composing the wax scales and those of the wax with which the combs are built; just such a difference as has been found to exist between malt food and malt sugar.

Huber. In regard to artificial honey, heretofore, I have not been able to comprehend how the sweet juice could, in the honey-bag of the bee, be changed into honey. Prof. Siebolt, however, has made it clear to me, and I can now believe that the change takes place partly in the honey-bag of the bee, and partly in its mouth.

Heretofore, I was of the opinion that such a change was impossible, that honey was in Nature alone—the distillation of the flower and the plant.

Dzierzon. Herr Huber thinks that the bees suck in the honey from the flowers very quickly. This is true, but the work of depositing it in the combs is not so easily accomplished. It is to be observed that the bees enter either with the whole body, or with the head into the cell, and that it takes them some time before they are able to unload their burden. It is well known that much of the honey, when it is first brought home is very watery, and generally is placed in the lower cells and afterwards removed to the upper cells, and this I belive is done by other bees; namely, the young bees, who use the pollen and are more fitted for purifying the honey. Under some circumstances, however, the honey may remain unpurified, namely, when there happens to be a rich honey dew, or when the pine or fir trees sweat honey in abundance, requiring all the force of the hive to gather it in, and little pollen is brought, the bees have not the time to attend to the purifying of the honey. The mass of the honey, not having all its nitrogen removed, may ferment and thus be followed by injurious consequences to the bees, producing dysentery, etc.

These glands play a very weighty part in the preparation of the food for the brood. Viewed in this relation, no mention of them has been heretofore made.

Dr. Hummon, of Ingolstadt, replied to the doubt thrown out by Herr Huber, as to the rapidity with which the change was effected. He instanced the rapid change which takes place in the food eaten by the human being. That in almost a second of time the starch is changed by the saliva into grape-sugar, and this latter, almost before reaching the stomach, is changed into another substance, so that the time occupied in gathering the honey, carrying it to the hive, and emptying it into the cells is fully sufficient for the saliva of the bee to effect most important changes.

Dr. Heller says, some four years ago, I wanted to examine what change sugar fed to bees, underwent. I made the experiment in the following way: I colored some pure, dissolved sugar, part with indigo and part with carmine. On one day I gave the one kind, on the next day the other to the bees for food. The following morning I found beautiful blue-colored sugar-syrup in the cells, and, the morning after, red-colored sugar-syrup in other cells. The color was unchanged; hence, I believe the food had been unchanged. This, however, was only a superficial judgment. Although this color was unchanged, I soon became aware that the bees were not satisfied with it. They took it away and placed it in other cells. In a few days I was unable to find either blue or red honey—only a yellow-colored, which in nowise differed from the ordinary honey. My experiment, so far as it was intended to mark the change of the sugar-food, miscarried. But my knowledge was enriched, and with this knowledge I hope to obtain a complete understanding of that which I have heard to-day stated from the mouth of this master of science.

Dr. Pollman thought it would be better should the chemist use for experimental purposes old, capped honey, rather than the new and fresh honey.

How can the weakening of stock, by too frequent swarming, be prevented?

During the discussion of this question, Herr Schelegiann made the following remarks: I have invented a wire lattice, by means of which the queen can be confined at the will of the bee-keeper to one or more combs, and prevented from laying too many eggs, so that the strength of the stock will always remain about even. In doing this, the bee-keeper must take into account both the fertility of the queen and the country in which his apiary is located. In a situation where many bees are lost, when flying out, the queen must have more comb at her disposal than where there is no danger of the bees being lost. In speaking now, I refer to my own neighborhood, Temesvarer-Cometats, in Hungary, and here I confine three combs (10x8 inches), for the queen to lay in, and find them sufficient to maintain the standing of the hive. The working bees can pass in and out through the meshes of the wire gauze, but the queen cannot; if I place it over the three combs in the centre of the hive, so that the combs and

queen are covered at the top, sides and bottom, the wire gauze reaching to the bottom of the hive. The queen will thus lay only in those confined combs, while the other combs will remain free from brood and will be filled with honey. The form of the wire gauze frames is thus: Its sides are movable. By this plan, also, can the drones be caught. A false bottom, however, is needed, by which the entrance of the hive is divided into two parts, the wire gauze covering the upper half of the entrance. The drones, on leaving the hive, pass through the gauze, and in returning pass in underneath the false bottom, where they can be captured and destroyed. Should I desire to have drones, I add a drone comb to these combs under cover. My apparatus will do to cover from six to eight combs.

Can bees be in winter too warm?

Dzierzon: It is known to all that warmth is the element of the bee—cold is its death. In winter, should the cold become too great, it may be injurious to the bees, at all events it will cost the honey which the bees will have to consume, in order to maintain the proper degree of animal heat. It is always better when the bees can maintain a proper and even temperature without the exertion of seeking honey. I believe that Herr Schonfeldt has not rightly comprehended his subject. It can happen that a swarm too much protected for the winter may suffer, but will suffer less because it is too warm, than from another ground—the difficult access of pure air. The hive may be too small, or the want of air may arise from the hive being overcrowded with the honey, thus hindering the admission of air; for the space occupied by the combs excludes just so much air—two bodies never being able to occupy one and the same place at the same time. How would it be possible for a swarm to be wintered too warm when the heat comes from the bees, and not from the sides of the hives? It is true, that in the example given by Herr Schonfeldt, when an outer and higher temperature be artificially produced, it may be injurious to the bees. The bees would be stimulated to breeding, when they should be resting. That would naturally be injurious, but the hive cannot of itself, according to my understanding, be too warm. The bees are able of themselves to regulate the temperature to suit themselves. Should—through any disturbance—the temperature be raised, some of the bees will appear at the entrance and create draught which will soon cool the hive. I am of opinion that the question must be answered in the negative. In my experience, that hive is nearest perfection which most readily holds fast to the heat and does not allow it to radiate, as then the bees will not be compelled to use unusual quantities of honey in order to generate heat. The better the sides of the hive prevent the heat from escaping from the inside, so much the better will they in summer prevent the heat of the sun from entering the hive. Thus they will be warm in winter and cool in summer.

Herr Kneipp: In all the experiments I have made, I have found that the buried bees wintered best. They have an even temperature, which is a great advantage. I not alone have buried my bees for some years past, but others also, and always with the greatest profit. The stocks are weighed before they are placed in winter quarters and when they are removed. With from three to four pounds of honey populous stocks winter well. The attempt to winter bees in a warmer temperature did not prove a success. My hives, owing to the warm temperature, obtain young brood too soon and become very restless. As soon as they are allowed to fly in the early spring, owing to the wants of the brood, the bees instantly seek pollen and thus many are lost. I have also made the experiment of wintering in an arched cellar, bees in a Dzierzon hive, leaving the side door open, and have succeeded well, but the burying turns out better.

Herr Kuhne: I would briefly say that for Upper Austria the wooden hive is absolutely injurious. We can only use hives made from straw or rushes. It gave us no little trouble, yet in the end we succeeded in reinstating the old straw baskets, so built as to admit the introduction of movable combs. In these hives the bees winter wonderfully well; they are permitted to remain on their stands without further protection, both winter and summer. In these hives you discover neither thirst, ice, mouldiness, nor anything else injurious to the bees. The bees adapt themselves to their climate, and all artificial arrangements to aid them will be injurious, and more especially when it is undertaken to give them a temperature at variance with the climate in which they have been reared.*

Herr Schmidt: I live in a locality where the honey very readily crystalizes, and I found the difference in wintering stocks in hives that are warmer; *i. e.*, pavilions. Here the famine will first break out. For the last few years I have proceeded in the following manner: As soon as I noticed, during the winter, that the bees were becoming restless, I removed the straw covering. Usually by the following day the swarm is quiet, but, if they are not, I place upon the top of the hive two pieces of ice, the size of my fist, and almost immediately they become quiet. A dampness will be precipitated on the walls of the hive by the cooling of the top, which will give the bees the needed moisture with which to soften their candied honey. I now never use the new hives before I have given them two coats of varnish, whereby the wooden walls

*Have any of our American bee-keepers wintered their bees in straw baskets; if so, what has been their experience?
G. S. W.

loose the power of drinking up the moisture, and thus prevent the bees from obtaining the needed moisture for dissolving their sugared honey. I have also a third remedy. When there is candied honey in the hive, take four pounds of flour mix one ounce of tartaric acid with it and permit this mass to boil for two hours on the fire, then remove it and pour into, stirring the mixture at the same time, two to two and a half ounces of prepared chalk which has previously been dissolved in water. The sugar through the boiling with tartaric acid loses its power to crystalize. This surrogate I have always fed my bees upon during the continuance of the honey harvest until the end of September. It has the advantage that it is carried by the bees to their broad combs and is first used. I have found that bees treated in this manner have wintered best.

Wertzel, of St. Mariex, in Steiermarck, Herr Kuhne spoke very warmly against wooden hives. I am from Steiermarck where great numbers of straw hives are used, especially in the hilly, cold regions. For ages back immovable comb hives have been used. Such hives I have seen standing along the wall to the number of from 30 to 40 set out. The bees left to themselves winter very well in wooden hives. In my neighborhood, near the Gleichenburg Baths, until recently straw hives were alone used; I was the first to introduce the Dzierzon hives. From that time forward it has not been unusual to meet with apiaries of 10, 20 and 30 Dzierzon hives, in which the bees have wintered very well, and the straw hives are constantly disappearing, and no one complains that the bees have not wintered just as naturally in these Dzierzon hives as in the others. The combs in the hives must have the needed supplies, the hive must be warmly surrounded, and then the wood will be just as good as the straw, letting out of view many other advantages. Of this any one can convince himself by visiting our neighborhood.

[THE END.]

[For the American Bee Journal.]

Adair.

MR. EDITOR.—I am sorry that my venerable friend, Mr. Chas. Dadant and his estimable son, should have taken offense at anything that I said in my communication in your April and May numbers, for I meant no reflection on Mr. D., nor did I think my language could be so construed.

It was unfortunate that the resolution of thanks to the Italian Bee Company was introduced by Mr. King, who was associated with one of the company in the editing of a bee journal; and, the remarks I referred to as having heard, I supposed were based on that fact, and not upon any known connection with Mr. D., who I never heard spoken of by any one except in the highest terms. Mr. D. is assured that I have no doubt of the truth of his statements about his connection with the importation, nor do I wish to be understood as deprecating his efforts; for while I think he is wrong in his notions about further importations in an *indiscriminate* manner, which is necessarily the case when large importations are made. I have never doubted his sincerity and honor, and I am firmly of opinion that his labors in his own apiary, in judicious selections and cultivation of the bees already there, for the two years he will have spent in Italy would be of more benefit that all the bees he will import.

I will not take up your space in repeating what I wrote in those two articles. The facts stated are not on my authority, but mostly quotations from Mr. D.'s own statements, and if the reputation of the Italian bee is injured he has contributed more to do it than I have. But I will take a little space to notice the following paragraph from Mr. D.'s article in your May number.

"As to the importation of more bees to the United States, according to Mr. Adair, it is useless, *if not injurious*. But he would be greatly embarrassed if I asked him why?"

Now this is not a fair statement. I did not object to the "importation of more bees," but to a wholesale, *indiscriminate* importation. Such I do consider useless, for what is the necessity for going to the trouble and expense unless we are getting something better than we already have? As to the evils of "in-and-in" breeding I am of opinion that Mr. D. "*would be greatly embarrassed*" if he undertook to prove that "every observing bee-keeper had noticed the inconvenience of consanguinity;" but I will not discuss that subject now, except to say that the most observing breeders of all varieties of animals, find that there is nothing in it—but, upon the contrary, it is upon that practice alone that desirable improvements can be secured, and is only injurious when it perpetuates and intensifies some physical or organic defect. But he italicizes "*if not injurious.*" I feel no great embarrassment in pointing out wherein it may be injurious, although I did not so state in my communication.

From the first settling of America, until the beginning of this century, we have the best of evidence that the honey-bee was free from disease and parasitic insect enemies. Since then we have imported both, viz.: foul-brood and the moth, if not something worse than either; I mean the "bee-disease," so-called, or bee-cholera, that has been so destructive of late years in the Northern and Western States.

The honey-bee is—in Europe—afflicted by a number of insect parasites, and parasite fungi, which have not as yet been introduced into this country, and I should consider it very *injurious* should any more of them be imported. That

terrible pest — *Phora incrassata* — that preys upon the pupa in the sealed cells, and is by many considered the principal cause of *foul-brood*, has not visited us yet. The *bee louse* (*Braula Cœci*), that lives parasitically on the body of the bee in Europe, causing great annoyance and destruction, has not been imported. The *Trichodes Apiarius*, which devours the young bees in the cells, has not yet been detected in this country. The *Meloe*, the *Sitaris*, and *Stylops*, parasitic insects that live on and in the bodies of the bees, the first of which also preys on the *larvæ* in the cells, are still, so far as known, strangers to our apiaries. While we have the wax moths, *Galleria Cereana*, already naturalized from Europe, to our sorrow; the equally destructive wax moth, *Achroia alvearia*, has not been brought over, nor has the intestinal worms, *Gordius subbifurcus*, and *mermis albicaus*.

These are, perhaps, but a moiety of the pests that we are in danger of from importations of bees, and with the experience we have with imported insects generally, the introduction of any one of them would likely be of more injury to us than all the advantages we would secure by importing free of cost every bee in Italy.

The Editor of the *American Entomologist*, Mr. C. V. Riley, in the number of that journal for February, 1870, says:

"On a careful and close examination, it will be found that *almost all our worst* insect foes have been imported from the other side of the Atlantic," and in confirmation of the statement he enumerates the *Hessian fly*, of which Prof. Lockwood says in the *Popular Science* monthly of September last, "That all the combined whirlwinds and destructive storms that have ever swept over portions of our land have not robbed the national wealth so much as this almost invisible, tiny creature, that dances in the sunbeam," the wheat midges, the bee-moth, the codling-moth, that is such a formidable pest to the apple and pear, burrowing into the cone of the fruit and causing it to fall off; the cabbage tinea, the red currant bores, the oyster shell bark-louse, the grain plant-louse, the cabbage-plant louse, the cheese maggot, the meal worm, the grain weevil, the house-fly, the cock-roach, the croton bug, and the different carpet, clothes and fur-moths.

He enumerates, as more recently imported, the asparagus beetle, that has become naturalized in New York and New Jersey. The rape butterfly, or cabbage caterpillar, a green caterpillar that eats the cabbage heads, almost honey-combing them. It was imported to Canada first, and entered the New England States, and in 1869 was in Northern New York, since which it has spread as far as Kentucky, and is fast belting the land with a scourge.

It is as bad with plants as with insects, for nearly all of our most pernicious weeds have been imported among us from the Old World, as, for instance, dog-fennel, Canada thistle, common thistle, burdock, plantains, mullein, toad flax, bind weed, Jamestown weed, lamb's-quarter, smartweed, fox-tail grass, buttercup, cow-cockle, and the notorious cheat or chess.

Mr. Riley estimates that each State loses, annually, from fifty to sixty millions dollars from those insects alone, or $2,000,000,000 is lost to the whole country every year. He shows further, that insects which, in Europe, are either nearly harmless on account of fewness in number, when introduced here, multiply at a prodigious rate, and acquire herculean powers of doing harm.

Upon this ground alone I am firmly convinced that unless the bees imported are preferable in some respects to those already brought here, that we are blind to the experience of the past if we do not profit by our misfortunes in this respect, and while contending with the plagues that already threatened the destruction of the culture of the bee, keep a watchful eye on every probable source of greater evil.

The wonderful productions of the Pacific States, in fruits and vegetables, is largely due to the fact that they are as yet free from the many insects and fungi that dwarf and destroy our crops here, and had a little care been used when the honey bee was introduced, then they might have been free from the ravages of the bee-moth. But I think I have said enough on this subject.

In your journal for June, my young friend, Mr. C. H. Dadant, undertakes to review my communication in your May number. I am sorry that he misunderstands my position so much as to construe anything I have said as an attempt to detract from the conceded merits of the Italian bee. When I say conceded, I mean the opinion of disinterested persons, who are not blinded by the novelty, nor prejudiced by pecuniary interest in the sale of them. But he seems, although agreeing with me in my suggestions as to improvements, to be desirous of making it a personal matter, and takes occasion to speak slightingly of my hive, and closes with some irresponsible gossip about my being interested in *starting the grey bee*, as he italicizes it. All I wish to say in answer to this unkindness, is, that so far as my hive is concerned I have uniformly avoided any allusion to it in my communications to the A. B. JOURNAL, except when first spoken of by others; nor will I now depart from my convictions of the self-respect that I think every bee-keeper should have, and descend to the tricks of the drummer and charlatan, as so many have done. If my hive has merits they can be published legitimately. As to the Grey bee, I will only say that I have no bees for sale, nor do I ever expect to raise the Grey bee, nor any other for sale; but I am in hopes that few of your readers have formed so low an opinion of me as young Mr. D. has. What I have written on the subject of improved

breeds of bees was not intended to injure Mr. Dadant in his business. I had my opinions and I wrote them, and I have another opinion, which is, that comments of the description that characterizes young Mr. D.'s communication would have been in better taste from some one who was less interested in the importation of so-called Italian bees, for ill-disposed readers will be very apt to say that those who are looking out for interested motives in others, are very likely to be prompted by the same kind of motives themselves.

Now, Mr. Editor, when it comes to such a pass that we cannot discuss questions connected with bees and their culture, on their merits alone, without looking for a dull axe behind every sentence, I—for one—will have nothing to do with it. D. L. ADAIR.

Hawesville, Ky., July 27, 1873.

[For the American Bee Journal.]

The Honey Bee.

QUEEN BEE—HER TREATMENT BY HER SUBJECTS.

The scene presented by the interior of a bee-hive has seldom failed to interest even the most careless observer, while it fills with astonishment the mind of the enlightened and profound philosopher. When the day is fine and the sun shining brightly, the habitation of these marvellous little creatures exhibits the aspect of a populous and busy city. The gates are crowded with hundreds of industrious workers—some on the wing in search of forage; others returning from the fields laden with honey and pollen; some busily engaged in building comb; some in tending the young; others employed in cleansing their hive, while four or five may be seen dragging out the dead body of a companion, and, as it would appear, scrupulously paying the last honor to the dead. It can, therefore, excite no wonder that the habits of these interesting insects should have attracted the attention of some of the best observers of ancient and of modern times. History does not inform us who first drew these insects from the wilderness and rendered their industry subservient to the purposes of man.

A community or swarm of bees consists first of workers; these are undeveloped females; amount generally to many thousands in number, and are easily recognized by their industry and by the smallness of their size; second, of males, or drones, of which several hundreds belong to each stock; these are larger than the worker, and live idly; over all presides a queen, the most important member of the whole of this little commonwealth.

A person may keep bees in the common box-hive for years, and never see this insect, about which more extraordinary things have been seen and written, than the reader would be disposed to believe.

Reaumur and Huber fully determined the influence which the presence of the queen has upon her subjects. The former divided a swarm and placed them in two glass hives, one of which, therefore, had a queen; the other being without one. The account which he gives of the conduct of the bees is too curious to be omitted. I give it here in his words: "After the tumult, excited by their removal into a little glass hive was calmed, and I had looked at it for ten minutes, for the first time of my life, I succeeded in seeing a queen bee, which was walking at the bottom of the case. I was recompensed in this instance, for my disappointments in the various attempts that I had previously made, for now I could view her as often as I wished. Indeed, I had it in my power to point her out to a large party who were at my house, not one of whom but evinced the greatest curiosity to see this renowned sovereign. For the first few minutes, in which I followed her with my eyes, I was tempted to believe that the stories of the respect paid her by the other bees, the train by which she was attended, were imaginary fables rather than real facts. She was alone, and walking perhaps at a slower pace than the rest. The friends who were with me were pleased to discover in her gait something of gravity and majesty. She advanced, unattended, to one of the squares of the hive, up which she mounted to join a group of her subjects at the top. In a little time she reappeared at the bottom, but still sadly neglected. She ascended a second time, and I lost sight of her for a few minutes; she then appeared for the third time at the bottom of the hive. Now, however, twelve or fifteen bees were ranged around her and seemed to form her train.

In spite of my inclination to believe that the first train which I had perceived was the effect of chance—in spite of my disposition to think that a big bee would be followed precisely because it was big—I was forced to acknowledge that there was some other foundation for the homage, the cares, and attentions which the rest paid to her who was destined to be the mother of a numerous progeny. The queen, with her little suite, disappeared for a moment among a cluster of bees. In a short time she reappeared at the bottom of the hive, when a dozen others hastened to join the train. A row flanked her on each side as she walked, others met her before, and made way as she advanced; and, in a very short time, she was surrounded by a circle of upwards of thirty bees. Some of these, approaching nearer than others, licked her with their trunks; others extended this organ filled with honey for her to sip; sometimes I saw her stop to partake of the food, at other times she sucked while in motion.

"For several hours, consecutively, I observed this insect, and always saw her surrounded by bees who appeared anxious to render her good

offices." The reader will remember that this was before any kind of movable comb hive was in use, or even thought of, and can understand how much Reaumur was delighted when he saw the queen for the first time.

The further detail of the "History of the Divided Swarm" is equally instructive.

RENEDIUR.

[TO BE CONTINUED.]

[For the American Bee Journal.]

Letter from New Bradford, Mass.

The past winter was so severe that many lost more or less of their colonies, but thanks to my bee house none of mine died. I have put my bee house also to another use, which greatly increases its value to me. I use it for a fruit house. The bees keep the temperature just above freezing, and grapes and pears keep remarkably well. I had a few vicar of Winkfield pears as late as March, and the Sieulle, so difficult to ripen without shrinking and becoming leathery, were plump and mellow into January.

Notwithstanding the great drouth we have had, the crop of honey has been quite good, both in boxes and by the extractor. In fact, owing to the prevalence of bass and tulip trees, for shade and ornament in the city, we seldom have a "miserable honey season."

From some cause unknown to me, I found about the last of April, a few cells of foul brood in three of my best hives. Now how did this happen when I have been free for two years. I have no doubt but that Alley, who likes to catch one on the hip, will say, "just as I told you; better burn and bury, or sooner or later it will return." Now two years is a long time for it to wait before reappearing, especially in hives and colonies that are entirely new within that time.

I can *guess* how it was introduced. When I first set out my bees the last of March, I fed with rye meal, and (very unnecessarily) put some honey in a plate on the edge of the feed box, which was knocked off and mixed with the rye; as it was moist or rainy and cold for a number of days the honey and wet rye was left carelessly to ferment before the bees began again to work on it. I soon removed it when the error and carelessness was discovered. I am afraid there are others careless as well as myself, and perhaps in the same way.

Well friend Alley, I did not bury or burn, neither was I much alarmed for my twenty colonies, over whose health and prosperity I had for two years been boasting, for I knew that I could control it, and in this instance probably with very little trouble, for I have a theory that if the first few cells of a foul brood are destroyed before the bees undertake to remove it, and so mix it with the honey and feed of the hive, the disease is removed, radically. It would be an interesting experiment to put a frame of foul brood protected by wire gauze from contact with bees, into the center of a full colony, to determine the question whether actual contact with the disease is necessary for its communication, or whether it can be communicated through exhalation. I have never heard of a well authenticated case where it was not communicated by the access of the bees themselves to the disease, or cause of the disease. I believe it takes some time for the disase to be virulent or rather extensive in the hive when it commences with only a few cells in this way, and that the bees are capable oftentimes of curing themselves by removing the dead larva before they have become really putrid and that animal poison developed with that disease which we in medical term call septicemia.

From the circumstances that there was no foul brood in the fall, or appearance of it in March when I set out the colonies, at which time I made a careful inspection, I was satisfied that the disease had only just commenced, and I was in time I thought to easily cure by pruning. I carefully cut out every cell diseased and the two or three healthy cells around it, and from one hive where the disease was the worst removed the qneen to be sure that all dead larva should be seen before a new generation was started. I was entirely successful: not a trace of disease showed itself afterwards. The number of bees in the colonies was small the space occupied by brood was comparatively small, so that I had every advantage in my favor of finding easily all the disease.

I did not care to nurse up this pest into virulence in order to make a cure in some other and more difficult way although I was thoroughly tempted to leave one for the experiment of curing by feeding the medicine without using the spray douche, or washing the combs in a disinfectant. Besides, I would like to have made trial of that new and nonpoisonous antiseptic and disinfectant, bromo chloralum, a suggestion for its use I saw some time ago in the JOURNAL, but cannot again find it. I have seen in the JOURNAL, and heard by letter that cures have been made by feeding alone. I should like to try feeding with bromo chloralum, and at the same time spraying the hive and combs with it once or twice a week. It is entirely harmless, as I have made the trial of feeding it to a healthy nucleus without any injury to the brood. I put one ounce to a pint of feed.

You see, dear Journal, that I still have faith in medicine, sulphate of soda and bromo chloralum. Only when it is safe, (and it requires judgment to know when it is safe,) pruning is so much more simple, and next to this Mr. Quimby's mode of brushing out the bees and making a new colony, and next to this medicine.

Yours truly,

ED. P. ABBE.

New Bedford, Mass., July 26, 1873.

[For the American Bee Journal.]

Greenhorn's Views of Some Things.

MR. EDITOR.—As your paper seems to be open for discussion, I will inflict on you and your readers some of my green ideas.

Every man has an undoubted right to defend his own property, but if that property should be offered for sale, then the public has a right to examine and fix its value. Any individual member of the public has the right to express his opinion thereof, both orally and in print. These are the rights on both sides, and in Greenhorn's opinion neither party has a right to complain of the other, unless false statements are made.

Now the patent bee-hive men come at us "greenies" with their flaming advertisements, praising their property, and how are we to judge properly of the thing, unless we can get some cute "Novice" or other to point out the defects too? With both sides of the picture, then we can judge for ourselves.

Friends Hazen, Alley and others pitch into Novice as if he has committed some great crime, contending that, as the laws of the country have given them patent rights, they are therefore at liberty to kill us greenies *secundem artem*, and if any blame is to be attached it must be laid to the laws, and not to the patentees; and, like the doctors, their song is, "God *giveth* and God *taketh away;* praised be the name of God;" though sometimes the worst blunders and impositions have been made.

Now, sir, setting aside the fact of great latitude being allowed in the matter of granting patent rights, let us suppose a man gets a patent for something in my line of business, and I find it is of little or no value to me, must I buy it because he has got the patent? And if a friend applies to me for my opinion of it, must I refuse it because a patent has been granted on it? This is Novice's situation. By experience he has found out the futility of many of the so-called improvements, and as we greenies have discovered (Novice's pieces A. B. J.), that he has sharp eyes as well as a sharp pen, we have made bold to ask his advice, and have induced him to publish his advice. (Gleanings.) Now, as long as Novice is honest in his statements, has any one a right to say, stop him? I think not.

Let us see if we greenies don't need him—just one, out of *many examples*. Not a hundred miles from here lives a fellow-greeny, who was run afoul of by a flaming patent-right man, and bled to the tune of $30.00. Farm right and hive, simply for the privilege of placing four hives back to back, with holes communicating; and also placing smaller boxes in like manner on top. What a pity Novice was not on hand with his friendly nudge-in-the-side. (Gleanings.) His pitiful seventy-five cents saves many a $30.00, more or less, in the United States.

If I understand Novice aright, he means to unearth all *worthless* patent rights in the bee line, and I for one must say, success betide him. Here is what he says, Gleanings, Vol. I, No. 1, p. 1:

"One of the most lamentable wrongs in bee culture is the custom of taking money for a 'a right to make and use' a hive, knowing that the buyer could 'make and use' a hive so nearly like it as to answer every purpose, without using a 'single one of the patented features.' It will be our especial aim to fully inform the public of all such transactions."

In another number, Novice says that the above challenge should be a bomb-shell, and from the way the fur is flying, I think his shell bids fair to be effective.

Once more: If a man has in reality anything that *is valuable*, he need not fear that we greenies will throw it aside (when satisfied of its utility), though Novice's bomb-shell should explode near by; for those shells will not hurt anything which is of itself bomb-proof—truthful and useful. Yours in need of light,

GREENHORN.

[For the American Bee Journal.]

A Day with Mr. Adam Grimm.

The 4th of August will always be remembered by me as a pleasant day, for it was spent with Wisconsin's bee-keeper in looking over his hundreds of swarms of Italian bees. After a walk of a mile and a half through the hot sun, from the depot, I reached his cool, pleasant retreat, and found him up to his eyes in bees. He gave me a warm welcome, with a smile on his genial face that showed his hospitable nature. It did not take long to get acquainted, and we were soon deeply engaged in talking *bee*, and Mr. Grimm *can* talk, and knows what he talks about. He was busily engaged in examining stocks, taking out honey, forming nuclei, introducing queens, etc., and getting his stocks ready to send off to the buckwheat fields, which he had been doing for several days; two loads a day generally, twelve to sixteen hives to a load. His boys do the hauling, while he prepares them for their new harvest. He now has eight hundred (800) swarms in eleven (11) apiaries, from four (4) to eleven (11) miles from his home apiary, and it keeps him on the jump to tend to them all. Says he hardly gets time to read the JOURNAL, much less to write for it. We will excuse him *now*, but when the season's work is over, and his little pets all safe and snug, *then* we shall expect to see something from him in the JOURNAL. Basswood is his main dependence, but this year his bees were not in the best condition to profit by it, so he will not have so large an amount of box-honey as he otherwise would.

He has no stocks or queens to sell, prefering to keep and increase them another year. He

does not like the extractor for market, as he cannot make people believe it is all honey that he ships. They cannot comprehend the extent and success of the business he is doing. To see fifteen (15) or twenty (20) barrels of honey at the depot, awaiting shipment, is likely to raise the idea of *molasses*. Mr. Grimm's plan of getting bees out of honey-boxes is as novel as it is original. He takes off his full boxes all at one time, places them on the floor of his bee-house, one deep, holes upward, each box touching its neighbor; then places a hive containing brood and honey and a caged queen in the centre of the pile, raised on blocks one-fourth inch high. The bees come out of the boxes, gather in the hive and form a new swarm. He keeps them there a few days, then releases the queen, takes the hive out into the yard, and there is his boxes clear of bees, and a new swarm. His bee-feeder beats anything of the kind I ever saw, for rapid and convenient feeding. And his *smoker* is the handiest thing out. He went through dozens and dozens of stocks, partly for my benefit and partly for his own. It was a real treat to see so many bees and queens, to one who has never been used to seeing more than fifty (50) or sixty (60) stocks in one place, and they all blacks. Mr. Grimm's Italians can *sting*, as a swelled fist could attest. In the afternoon, when the young bees were out for a frolic, it sounded like a dozen big swarms coming off at once. I was shown the figures of Mr. G.'s business for the past five or six years, and it was enough to make us little bee-keepers catch our breath in dismay at the thought of ever trying to do *half* as much. Then to see the hives, boxes, frames, and all the fixings for the business, was enough to make every bee *dig* all the harder at the sight of it. I had a very pleasant time, and am afraid I taxed his patience some, for he spent two or three hours in showing and explaining things. I take this opportunity to again thank him and his family for the courtesies extended to me.

Yours truly,

W. M. KELLOGG.

Janesville, Wis., Aug. 5, 1873.

For the American Bee Journal.]

From Nebraska.

MR. EDITOR:—I have been a reader of the AMERICAN BEE JOURNAL some four or five years, and I believe have never asked the favor of space in its columns. Will you grant the little space asked for now?

I am very much interested in bee culture. I have now twenty-nine stocks. I have never had any disease among my bees. I winter in the cellar where no vegetables are kept, and with the temperature as nearly at the freezing point as possible. I feed in spring both unbolted rye and syrup. Although I cannot boast the large success attained by some, I am fortunate at least in meeting with an average. I took nearly 800 pounds last year from fourteen colonies.

In addition to the A. B. J., I take the *Bee-Keepers' Magazine*, the *National*, *Gleanings*, and several agricultural papers more or less devoted to this branch of industry. My bee journals are among the first I read, and generally with the greatest interest and profit. But in the July number of the A. B. J., page 15, is an article from a man (?) calling himself "Simplicity," with which I am particularly disgusted. Tastes differ. Because "S. Plicity" can see nothing to admire in a beautiful picture, is that any reason why others of different culture and temperament should not gratify their taste? In plain view from where I write, can be seen the five chromos of which "S. Plicity" would make sport. They are admired by all the family, as well as by the numerous visitors who from time to time call at our house. Am I fortunate or unfortunate in being possessed of a taste for the beautiful in art as well as nature, and in drawing around me a circle of friends of like taste.

According to "Simeon," the editors of the *Bee Keepers' Magazine*, a work devoted exclusively to bee culture, have grossly erred in stitching onto the said magazine a couple of extra leaves, to be used for advertising purposes, whereon the qualities of the "5 superb chromos" have been properly set forth.

Will Simeon tell us in his next, of the practical benefits in bee culture to be derived from reading his article. We have read it attentively and "can't see it."

O. HARMON.

Nebraska City, Neb., July 17, 1873.

NOTE BY ED. A. B. J.—"Simeon" needn't answer the question at the close of the above communication, because we have had *quantum suff.* about the chromos. Mr. Harmon is quite right in doubting any practical benefit to bee culture comes from such dicussions. Whether the chromos are miserable daubs, or beautiful works of art, is a question the solution of which will not affect the honey yield of the country a particle. Our space can be put to better use than either telling the public that "S. Plicity" despises the chromos, or that our Nebraska friend is enchanted with them. We think now it was a mistaken editorial lenity to publish "Simeon's" strictures. Having done that, we could hardly refuse to insert Mr. Harmon's reply. We have dealt out impartial justice, as well as we know how. *Exunt* chromos! Adieu chromos!

THE greatest enemy of the bee is the ignorance of man.

DZIERZON.

[For the American Bee Journal.]

Little Things.

(These, Mr. Editor, I must class with my "Jottings from the Apiary," in July number of the present volume.)

It is an old axiom, "Save the pennies and the dollars will save themselves." Why may we not coin a similar one for the apiary? "Do little things for your bees (*and at the proper time*), in return they will do great things for you." And now for a few little things:

Feeding.—If the honey product is scarce in the fall, feed to induce the breeding of young bees for wintering; feed in the spring to induce breeding, and have each stock strong for the honey harvest, and for making swarms.

Supers.—Do not extract honey, or place supers on or around your hives until you are satisfied the *winter home* of each colony is filled with stores.

Extracting—Remove supers and extract honey as fast as it is in proper condition. Honey should never be extracted until the combs have been sealed by the bees. In extracting during a scarcity of honey, be careful to leave no honey exposed; nothing will induce robbing so soon, especially in the fall, as the careless use of the extractor.

Robbing.—The most complete check upon robbing bees is to place a bunch of grass, or wet hay, over the entrance to the hive. The bees will find their way to the entrance to their own hive, the robbers will be caught by the sentinels in passing through the grass, and soon cease their pilfering.

The King Bird.—Kill him wherever you find him. It is true, he generally confines himself to the destruction of drones, but I have this summer lost two very fine queens (and probably more), from his gluttony. He will often leave his perch and snap up a worker from the blossom of the clover. Kill him, open his maw, and you will be satisfied.

Worms.—Have entrance blocks, with passages cut in them, at the mouth of every hive. Examine them every morning, and you will be surprised how much you can aid your bees in destroying the worm which produces the bee-moth.

Combs.—Both full and empty combs should be *well brimstoned* before putting away, or using for a new swarm. It is well also to brimstone supers full of honey or empty comb, and then store them in the cellar or other cool place.

Water.—Be sure to have a number of troughs, with corn-cobs and gravel placed in them, and filled with pure water, sitting around your apiary; a little salt thrown occasionally into the water is also a great help.

Spiders and Ants.—Destroy all spiders and spider-webs around the hives, and thereby save the lives of many of your bees. Ants do but little harm, merely seeking the hive for the warmth afforded by the bees, with which to hatch their brood.

To Correspondents.—Please date all your articles, and give us your residence, (county and State), as the experiments you kindly relate for our instruction may not be at all practical in our locality.

"B."

Beaver, Pa., July 25, 1873.

[For the American Bee Journal.]

Wintering Bees.

There is no question that so deeply concerns bee keepers as how to winter bees successfully. If a man does not get much honey, or does not get a good price for it, but has his bees left, he can try again with the hope of doing better next time; but if his bees die in wintering, the goose that lays the golden egg is dead!

Throughout the northwest there are more bees lost every year in wintering than from all other causes combined. Last spring found, at the lowest estimate, nine-tenths of all the bees in Iowa and Illinois, dead. One man of my acquaintance lost over three hundred stands. Many persons having from ten to twenty stands lost every one.

I have kept from twenty to forty stands in the common Langstroth hive over eleven winters. During ten of these I wintered them in the cellar, and lost altogether three stands that ran out of honey. For the last four years I have not lost any. The other winter—the winter of 1865–6—on account of having too many irons in the fire, I neglected my bees and left them on their summer stands, and by the middle of February fourteen stands (just one half) were dead. I dug the others out of the snow drifts, put them in the cellar and saved all of them.

Having had such uniform success in wintering in the cellar and having examined the circumstances of many who have failed, I have thought I might help others by giving a few of the principles by which I am governed in my operations. I will state them in the order of their importance.

1. *The room in which bees are wintered, be it cellar, bee house, or clamp, must be of an even temperature, about* 38° *Fahrenheit, not going below* 32° *nor above* 44°.

If it is too cold the bees will eat too much, fill themselves with faeces and have the dysentery. If it is too warm they will be uneasy and want to get out of the hive.

2. *The bees should be put into the cellar or bee house, early, or on the first really cold day.*

If they stay out for some time after they have flown they will be partially filled with faeces, will be uneasy all winter and smear their hives badly before spring. If they stay out late there will be some moisture, perhaps frost, collected in the hive, and they should go in as dry as possible. My bees wintered better last winter

than ever before. I put them in the cellar Nov. 14, the first cold day we had, while the hives throughout were as dry as midsummer. I took them out March 10. The combs were generally dry and free from mould, and the bees strong and healthy.

3. *The room should be entirely dark.*

When this is the case and other circumstances are favorable the bees will be quiet all winter without closing the entrance to the hive, which from my experience I think preferable to closing it. If the room is light and bees are closed in the hive, they will gnaw for perhaps, half the winter, to get out. If they are not closed in, they will come out to the light and never get back.

4. *The room should be as dry as possible.*

I always put my bees on a platform about two feet high to avoid the damp air near the floor. Three years ago last winter the water was six inches deep in my cellar for some time, and the floor was damp from that until spring. I did not lose any bees, but in the spring the hives were wet inside, the frames damp and mouldy, and the bees out of sorts generally. The next summer I put a drain to the cellar, and since then the floor has been dry, even dusty, and I have had no trouble whatever.

5. *The larger the room the better.*

I have used three different cellars. One, thirteen feet square, I used one winter; another fifteen by twenty-six feet I used six winters, and the one I am now using is twenty-five by thirty-five feet. In the last the temperature is less variable, there is less moisture, and bees have better ventilation than in either of the others. Large rooms are healthier than small ones for bees as well as people.

In my experience I have not found anything additional to the above essential to successfully winter bees.

In the matter of the ventilation of the hive, I have tried having the honey board off and having it on, having the hive open below and having it closed, have taken the honey board off and covered the frames closely with clean dry corn cobs, have covered the frames with a piece of old woolen carpet folded double, but never found these things to make much difference if everything else was right.

I think perhaps the best way is to leave the hive open below as it is during the summer, and if the cellar is damp take off the honey board and cover the frames with some kind of old woolen goods.

My bees have always wintered on their natural stores except last fall I fed sugar to a few stands that had not honey enough. I believe however that white sugar syrup is better for wintering than honey if a person feels like giving the labor to make the change. The syrup is a stronger or richer food than honey, produces less faeces and consequently the bees will bear confinement longer than on honey.

I have wintered nuclei of from three to five frames (full size) for the last two winters without any trouble, but I have had trouble with them and with weak swarms during the cool weather in April, some desert their hive, some perish with cold. This time of year I am very much troubled by bees filling their brood combs with pollen. I am now taking out and saving a number of frames so filled, and next spring after giving the bees of my nuclei a chance for a purifying flight on some warm day, I will give each nucleus a frame of pollen, and a sponge of water, put them back into the cellar and let them remain there until warm weather comes if it is not until the first of June.

Yours truly,

W. J. RONALD.

Grandview, Louisa Co., Ia., Aug. 15, 1873.

[For the American Bee Journal.]

Gallup on the Adair Hive.

The reader will recollect that we promised to give our views about the New Idea Hive, etc. The hive is a continuous chamber, ten inches in height, thirteen inches in width and four feet long. After the brood nest is well established, it is placed in the centre of the hive and the ends are filled out with ¼ or ⅛ sections for surplus. The entrance is in one end, consequently there is but very little ventilation. It is composed of close-fitting sections, which form the hive proper, and those are inclosed in an outer case, making the hive in reality double cased. We found that in extreme hot weather, with the thermometer up to from 95 to 110 in the shade, nearly the entire swarm was driven to the outside of the hive, and in ordinary weather, too, such as we had last season, on cool mornings there would be a puddle of water in the entrance, one-fourth of an inch in depth, for the bees to wade through. But in an even temperature, of from 75 to 85, everything worked satisfactorily.

Mr. Adair claims that the sections are an advantage over the open Langstroth frames in economizing the animal heat, etc. He further says that the queen does not deposit eggs to within about one inch of the wood or sides of frames, etc. (We are quoting from memory, and may be a little out of the way.) Now, Mr. Adair's hive may be ventilated all right for his climate; therefore we are not going to accuse him of falsehood. The close sections have the same objections that all combs have that are fixed at permanent distances, and are not *near so easily* manipulated, without crushing bees, as the open Langstroth frames. And we think that Mr. Adair's objections to properly constructed open frames will not hold good. But we think Mr. Adair has the right form for a hive when we come to understand how to work it. The reader will recollect that we formerly had objections to this form of hive, because we

and several others had failed entirely with it. But we failed in not getting Mr. Adair's idea of moving the entire brood nest back from the front.

You will see a communication from Upper Canada, in the December number, on his (the writer's) objections to combs running crosswise of the entrance. But if he will adopt Mr. Adair's plan, and move the entire brood nest, after it is established, back to the rear of the hive, I think he will succeed. I again refer the reader to Progressive Bee Culture. (There is such a thing as progressive bee culture.) Also, to *Annals of Bee Culture* for 1872, for Mr. Adair's claims on his form of hive, etc. The hints there thrown out are well worth a close and impartial examination by the progressive bee-keeper. "Novice" *cannot stop to theorize;* but it is (or was) by theorizing that our very best posted bee-keepers have arrived at their present standard of bee-keeping. Webster says: "Theory is a deduction from established truth, from which it follows as a necessary consequence." There may be truths which we do not yet fully comprehend, even in bee-keeping. We are well aware that many will fail to understand or comprehend Mr. Adair; but that is no proof that he is not in advance of a large proportion of bee-keepers. E. GALLUP.

[For the American Bee Journal.]

Letter from Tiverton, Canada.

Thousands of colonies of bees perished in Canada last Spring, owing to the *clear, cold* weather, and *raw, frosty* winds with which we were visited, the poor little bees were enticed out of their hives, with the clear light, and warm rays of the sun, but the cold frosty winds prevented their return. In this locality, they could not safely venture out before the *middle of May!*

My bees were taken from winter quarters on the 17th of March, and almost in as good condition as when put in on the 30th of November, except one colony which died for want of food. But some of them soon became so reduced that had I not united them, they would have perished. With care, however, I got them through to the warm season.

But could not some remedy be suggested, Mr. Editor, to prevent the bees from leaving their hives on unfavorable days? Novice tells us that he has the entrances of his hives toward the East. Is this done to meet the difficulty alluded to? Since the middle of May, the season has been all that could be desired for bees; and twenty young Italian colonies have been added to my apiary, all of which are strong and active, and honey is now collected in great abundance from basswood blossom and white clover; though I am sorry to say the former is not so plentiful this season as on former years.

I have been using the extractor pretty freely last month, though not to the same extent as some on your side of the line report. I am not yet reconciled to the system which leads to the removal of all honey in the Fall, and then feed with an inferior food. The little industrious fellows deserve the very best food during those dull months they are imprisoned with snow and frost, and with me, the hive that does not weigh 30 lbs., including bees, comb and food, in November, is marked *under weight*, and my attention is fixed on it early in Spring, more than on any other.

In my letter last year to the JOURNAL, I stated that I discovered a worker bee hatched in a queen cell; the same thing has met me this season. There is nothing to distinguish the cell from another queen cell, except that it takes a longer time to hatch than when queens are produced.

If you think the above worthy of a place in the A. B. J., you can insert. Wishing the A. B. J. prosperity,

REV. I. ANDERSON,

Tiverton, Bruce, Ontario, Canada, Aug. 5, 1873.

[For the American Bee Journal.]

Will R. King.

DEAR JOURNAL.—It has been a long time since we sent a communication for your columns, in fact, Mr. Editor, we have written nothing for the JOURNAL since it has been edited by you. This is not because I did not wish to write, but because most of the time we have not been able to write; in the outset we must say, that we think the journal has improved very much in the past six months, not that Mr. Wagner did not give us a good journal, no no, but bee keeping has progressed very fast and we find that our old war horses are still at their posts, and that they have kept up with the age in which they live and at all times are ready to tell us what they have learned; we even see that some of our "novices" have discovered that first-class bee hives can be made for $1.00 each, ha, ha, we wonder how long it will take them to get this well "rooted" in the minds of North American bee keepers. We are very much afraid that another long cold winter like the past will freeze it out, sap, "root," and all. If a wooden moulboard plow only cost one dollar I must buy it and use it, even if I cannot kill the weeds so well, or plough so deep, just because a good strong well made steel plow will cost from $2.50 to $5.00.

We are indeed glad to see that friend Freeman, of Olustee Creek, Alabama, is a reader of the journal, for it has only been about eighteen months that he was an advocate of *nine feet of lumber, saw and hatchet, and a few nails; or, if this was not convenient, to take a hollow log for a hive.* Glad to know that he has come to the conclusion that the honey Sampson found in the carcass of the lion was indeed in a movable comb

hive, for the combs indeed must have been attached to the ribs of the carcass. Mr. Editor, these bee journals are doing a great work, and will eventually enlighten the whole world; we see from the last *North American Bee Journal*, that A. F. Moon has quit his journal and gone down into Georgia to peddling the Thomas bee hive, and has left a painter by the name of McFearson the bag to hold. We were at Indianapolis a few days ago and undertook to find him (Moon), but no Moon was to be seen or heard of; all was "total darkness." The office was closed up and the newspaper curtains were down. There was no crape on the door, but from what we learned we would not wonder that there would be very soon. A strange phenemena, "the Moon" arises away up in the northwest and sets away down south. But then we are prepared to hear almost anything and not be astonished in these times of dollar hives, and no mistake.

We have not been able to give any attention to bees this season, but those that passed through last winter have been doing well this season, and we believe all will go into winter with as many or more than they did last winter. I have reference to Ky.; I am now at Champaign, Ill., on a visit to friends, recruiting my health. I find that bees are doing well in this section as it has been very seasonable here.

[For the American Bee Journal.]

How we Appreciate Novice and Rowell.

The only reply I have to make to Novice and Rowell's articles in the last (August number) A. B. J. is this: I will furnish any one with bee-hives of any style, that he does, or anything else in the bee line (provided it will not infringe upon any patent or upon the rights of anyone, as I won't advertise to break the United States patent laws, or the laws of decency,) ten per cent. less than what Novice says he will do it for. I will guarantee that the stock and workmanship shall excel his in all respects.

I will not furnish bed-quilts nor pillow-cases, as such things are not needed about our hive. We have made arrangements to have hives and material shipped from a factory in Ohio, and we will soon have an advertisement in the A. B. J., giving full particulars.

I make this statement, as the western readers may say that the difference in transportation charges may amount to more than the ten per cent. We are not to be outdone by any man in the bee kingdom. We were the first to reduce the price of Italian queens so that they could be purchased at a low figure. We made arrangements, years ago, with Mr. Langstroth for selling his hive in the territory owned by him; and we can furnish those $1.00 hives that cost $3.45 (see article on pp. 36 and 37, August number A. B. J., under the head of "Dollar Hive," by "T. S."), at figures much less than Novice can begin to. We wondered how it was that he could sell the two-story hive so low, but we had no idea that there was any deception about it.

Mr. Rowell has an idea that we feel considerably hurt by Novice's articles in the A. B. J. Let me assure you, Mr. R., that we do not feel in the slightest degree that way. And we are not afraid to read N.'s articles. If you want to read the advertisement on first page under Novice, I won't object to it; but we have read that same old advertisement so many times that we know what he has for sale. If you can't remember you had better read them, as they appear in each number of the paper.

I am glad that you appreciate them, even when they are in the wrong columns. This is not intended as an advertisement, but only as a fitting rejoinder to Novice and Rowell's articles in the August number. H. ALLEY.

Wenham, Mass.

[For the American Bee Journal.]

To Novice.

Mr. Novice, you must remember, when you tell us of taking your swarms into a spare room, warming and feeding them up to get rid of disease, that we "little toads" don't always have the wherewith to furnish the empty rooms and stoves. What are we to do then? Will old last years' pollen in the combs do to feed young bees, in the Spring before new pollen comes on? You asked me some time ago, if my swarms were strong in the Spring. Yes, some were very strong, but there was no honey for them to get. Some people complain that honey makes them sick. Just take a bowl of sweet milk and drink it as you eat the honey, and my word for it, you will not be troubled by any bad effects. W. M. KELLOGG.

Janesville, Wis., Aug. 5th, 1873.

Fourth Annual Meeting.

Chautauqua Co. Bee-keepers' Association will hold its fourth annual meeting, September 17th, on the fair ground at Jamestown, N. Y., the second day of the county fair, at the Speakers' stand. A general invitation is given. The Agricultural Society have offered more and larger premiums than ever offered by them before, especially in the bee department. We anticipate a large show of bees, bee-hives, extractors, feeders and honey in various forms.

J. M. BEEBE, President.
C. E. Benton, Secretary.

[For the American Bee Journal.]

Iowa Beekeepers' Association.

The next meeting of the Central Iowa Beekeepers' Association will be held on the grounds of the State Agricultural Society, at Cedar Rapids, commencing on the second day of the

State Fair, (September 9.) A session will be held each day of the fair. All who can, that are interested in bee-keeping, should be in attendance to either learn or teach. It is expected that arrangements will be made for one or more lectures on bee-keeping, by noted bee-keepers, during the sessions.

A. B. MASON, *Sec'y.*

Waterloo, Iowa, Aug. 2, 1873.

[For the American Bee Journal.]

Michigan Bee-Keepers' Convention.

The annual convention of the Michigan Bee-Keepers' Association will be held, as usual, at the time and place of holding the Michigan State Fair, which takes place at Grand Rapids, September 15th to 20th. The sessions of the Convention will be as follows: Wednesday, 17th, 7:30 p. m.; Thursday, 18th, 9 a. m., and 7:30 p. m; Friday, 19th, 9 a. m.

Papers of interest, on leading topics, are expected from some of the ablest bee-keepers of the country, and every subject of interest, will be open for general discussion and remarks.

Prominent bee-keepers of Michigan and adjoining States are expected. Everything bids fair to have a capital time, and the most cordial invitation is extended to all interested in the promotion of bee-culture as a science, or who are or anticipate being engaged in bee-keeping for profit or pleasure. Come one, come all, bee-keepers, and let us have a good, social time, and mutually improve by an interchange of ideas and experiences. To those who cannot be present, and especially of our own State, we should be thankful for any statistics they may be able to furnish, such as the number of swarms wintered, the amount of increase, the amount of honey taken, either from boxes or by extractor, the kind of soil upon which located, the kind of timber for bee forage, etc. Such statistics are valuable, and bee-culture, if established as a science, must be established by statistics. All such communications should be addressed to J. W. PORTER, Sec'y.

Springlake, Mich.

Reports, Experiences, and Opinions.

J. E. Hetherington, Cherry Valley, N. Y., writes Aug. 6, 1873:

Bees are doing finely with us.

W. Lamprecht, Cardington, Ohio, writes Aug. 11, 1873:

Bees have done well this summer here, lots of new swarms but little honey.

J. S. Hill, Mount Healthy, Ohio, writes Aug. 13, 1873:

Our yield of honey this season is 6309 pounds. 1989 pounds box honey, and the balance machine extracted.

J. R. Bledsoe, Natchez, Miss., writes Aug. 7, 1873:

The past season here has been so rainy that bees have not been able to store much surplus honey, otherwise they have done well.

Dr. H. W. Sedgwick, Granville, Ohio, writes Aug. 8, 1873:

The AMERICAN BEE JOURNAL is the best, most practical and really the only simon pure *Bee Journal*, that is published. Wishing you much success.

G. W. Zimmerman, Napoleon, O., writes Aug. 18, 1873:

"Bees here are swarming at this date, and doing finely. I have trebled mine in numbers, and have now 70 colonies, all Italians—three barrels of honey and will extract one or two more this week."

J. L. Davis, Holt, Mich., writes Aug. 20, 1873:

"I have one hundred swarms of Italian bees, and will have about 1000 lbs. of surplus comb or box honey, and seven or eight hundred lbs. of extracted."

D. G. Hervey, Dunlap, Ill., writes August 8, 1873:

The season has been very dry here and very little honey gathered. In June M. M. Arter, Crestline, Ohio, recommended silver hull buckwheat for bees. Will some of the bee-keepers be so kind and favor us with a report of its honey producing qualities, yield per acre, quality of flour, etc.

J. P. Clements, Tunnel Hill, Ga., writes Aug. 13, 1873:

Bees have done poorly here this season, the spring was too wet and the summer too dry. Buckwheat is now blooming, but the bees do not work upon it.

Send the AMERICAN BEE JOURNAL along and I will always cheerfully foot the bill. I take three others and would not exchange the A. B. J. for all the others.

Dr. T. J. Kennedy, Castalian Springs, Tenn., writes Aug. 12, 1873:

Bees did well for about ten days in May, since that time there has been no honey gathered, if some of the fall plants do not furnish honey they will be bad off. I have sowed buckwheat and alsike; the alsike has done nothing yet; the buckwheat it is hoped will do something still later. I will send in a few days for the back numbers AMERICAN BEE JOURNAL. They are so superior to any other published that every bee keeper should have them.

R. A. Parker, Abingdon, Ill., writes Aug. 15, 1873.

"From 75 colonies, I had but eight left this Spring. I bought two Italian stocks from T. G.

McGaw, Monmouth, Ill., and have now increased them to 25 and have them about all Italianized

In this part of Bee-dom the season has been very unfavorable for bees, we have had but little rain and few flowers for bees to work on since July fourth. Long live the AMERICAN BEE JOURNAL, and may they who give it life prosper."

Thos. Pierce, Gansevoort, N. Y., writes Aug. 11, 1873:

Bees have wintered very poorly for the past three winters, especially the last winter, many losing all. I started with twenty good strong stocks, lost all but four. The season has been cool and very dry, and bees stored but little box honey. I have replenished my stock buying and have no reason to give up, as the dear little bees are always willing to work and they have been very prosperous in the past and trust they will again. So send on the AMERICAN BEE JOURNAL and let us read, study and practice and that will make perfect.

Greenhorn, middle Virginia, writes July 13, 1873:

Bees wintered well with us in almost all sorts of hives, without any sickness or bee houses. They started to work finely, both breeding and gathering pollen and honey in March and April, but in April and May received a severe check by the cold and long continued rainy weather, which continued so long as to produce much starvation. The latter part of May the weather became clear and warm; and then the bees set swarming to such an extent as to seriously injure the stocks, and so far to destroy all prospects of the honey crop in boxes. Honey season mostly over with us.

E. Brown, Point Bowan, Ont., writes July 23, 1873:

As I have seen no report in your valuable journal from this section of the country, I will write you a few lines and tell you how my bees have wintered. In 1871 I wintered forty stocks without losing any. In 1872 I commenced to winter sixty-four and lost two. In 1873 I commenced to winter seventy-nine and lost one. I sold three stocks this spring which left me seventy-five, and they have increased to one hundred and two. Other bee keepers are complaining on account of losing nearly all their bees last winter, which was a very severe winter. I have made twenty-four of Novice's Simplicity hives and like them well.

J. Jones, Philipsburgh, Pa., writes August 12, 1873:

Last winter was very severe on bees in this section of country, a great many died. I lost sixteen out of twenty-four, after the first of March, with plenty of honey in their hives, but the weather kept so cold through March and April that they could not get to their stores and therefore starved to death with plenty of honey in their hives.

The eight I had left were very weak, but they have done well. I have been trying to increase them by artificial swarming, and could raise plenty of Italian queens, but no Italian drones, there being no drone comb in the hives, therefore I am afraid the young stocks will turn out hybrids. But I have ordered six queens from E. M. Johnson, Mentor, Ohio, which I think will help me out of the difficulty, and at the end of the season will report my success.

Coggshall Bros., West Groton, N. Y., writes Aug. 9, 1873:

Bees have done well this season, what few there was left. We saved our bees by having a bee house. We had 140 swarms last fall, 78 in the bee house and the rest outside. We lost nearly all that were left out doors. There was hardly a black bee left alive here last winter. We have got over 4000 pounds of honey from our seventy swarms this spring. We had one swarm that gathered sixty pounds of basswood honey in six days, in two days it gathered twenty-two pounds, or eleven pounds per day. We have increased our bees to 155 swarms.

When we use two-story hives we find that the bees will build worker comb in an empty frame placed between two sheets of drone comb. We have two apiaries and shall build another bee house this fall. It will pay for wintering the bees in one winter. Our buckwheat honey season has just commenced, but basswood beats the world.

Samuel Luethi, from Gnadenhutten, Ohio, writes July 29, 1873:

Our story about bees is the same you get from other parts of the country; a hard winter, and many bees lost, and the few colonies that are left are not much disposed to swarm. In my own apiary I made artificial swarms and succeeded well by giving the new swarms a full set of frames with brood and honey in them, taken from other hives and replacing said frames with frames filled with empty combs and letting the new swarms raise their own queens.

On the 14th of this month I made an artificial swarm into which I intended to introduce an Italian queen the next day, but did not receive the queen until the swarm had some queen cells sealed. The cells were destroyed and the queen caged five days. On the fifth day the hive was set over a bottom board with a wire cloth ventilator in and a pan with rotton wood burning in it set under the ventilator, and the bees and queen smoked for about fifteen minutes, after that the queen was liberated and well received. But a neighboring colony soon discovered the helpless condition of the stupified bees and commenced robbing in great earnest, but the pan with the smoke in soon dispersed the robbers, but it had to be kept in front of the new swarm all day for the protection of the bees.

THE AMERICAN BEE JOURNAL.

Chicago, September, 1873.

Acknowledgements.

Subscribers will find the date at which their subscriptions expire on the printed slip attached to their copies of the JOURNAL. The date given with each subscriber's name, will show the time to which the subscription has been paid, and will constitute a receipt for moneys remitted.

WE regret to learn by private letter from Mr. Cowan, that his father-in-law, Rev. L. L. Langstroth, is still in very poor health. He has, we are sure, the deepest sympathy of his many friends.

Bees at the Vienna Exposition.

Our German brethern, it seems, were not discouraged by the refusal of the authorities of the Exposition at Vienna to permit living bees to be exhibited at the Exposition. They have, under the auspices of the Vienna Beekeepers' Union, resolved to have an Exposition of their own, in which to exhibit to the visitors the advance made in bee culture. The exhibition takes place at Simmering, in the suburbs of Vienna, and will extend from July 1 to September 15. We regret that the notice of this intention of our German apiaran's was not known here earlier, so that our American beekeepers could have availed themselves of this opportunity to show in Europe the progress we have made in this country in bee-culture.

The "He-bees."

We have seldom in all our life felt so much like indulging in "cursory remarks," as we did when we opened the August number of the A. B. J., and our eye fell on the unfortunate *erratum* which disfigures page 29. The worst of it was we didn't know who to blame. If we had only known who was responsible for that egregious blunder, we should have obtained some relief by coupling his name with some uncomplimentary adjectives and wholesome abjurgations. But we didn't know, and we don't know yet. Indeed we have concluded not to investigate the matter, but to dismiss it with a few general remarks and reflections after the following fashion:

Copy is often marred by strange, unaccountable blunders. Printers are thought to be fully "justified" if they "follow copy." Printers are a blundering race of mortals. A fatality seems to haunt them in respect to making mistakes. Proof readers sometimes blink the eye just as they come to some glaring blunder which it seems as if it were impossible not to see. Some errors are like some criminals. They have a wonderful faculty for escaping detection, and so a mistake will pass through half a dozen hands and remain uncorrected. Finally, accidents will happen, not only in the best regulated families, but in the best regulated printing offices.

After we had got over our first fit of vexation, we began to wonder whether it really was an error, after all. We saw that the article was a translation from the *Bienenzeitung*, and knowing how far the Germans are ahead of us in the science and art of bee keeping, didn't know but they had succeeded in producing a species of "he-bees" that would gather honey, or try to, but being inexperienced at the business, didn't know exactly the proper time to go out foraging. This "happy thought" soon had to be dropped, but it occurred to us to commend this point to our advanced and advancing friend Adair. He has more faith than any man we know in the possibility of changing bee nature. Now here is a "new idea" for him. Let him try his hand on the "he-bees," and train them to search for honey. It would end all our trouble about drone-comb, multiply our working force very greatly, and the apiarian world would pronounce blessings on the man who invented *drone-workers*.

Mr. Quinby's Plan of Sending Queens by Mail.

We have pleasure in testifying that Mr. Quinby's method of mailing queens, described by him in our last issue, is a complete success. The package promised by him duly arrived at the office of the A. B. J., in Chicago, August 7. It was remailed to Guelph, and came into our hands all right on Saturday evening, Aug. 9. Circumstances compelled our subjecting the little party of prisoners to a protracted confinement, as we were leaving home for an absence

of several days. There was an ample supply of loaf sugar left, but the sponge was quite dry. We remoistened the sponge, and hastily put the package on the top of a stock of bees, next the frames, intending to move the hive, and give the newly-arrived queen all its foragers, on our return home. It was the 14th inst. before we were able to liberate that queen, so that she was fully *nine days* in the close confinement of the package in which she was mailed with no other sustenance than the loaf sugar and water. When we let her out, she flew very briskly to the window of the room, and buzzed about in a most lively manner. She looked rather attenuated, but was otherwise, to all appearance, in excellent condition. We caught her, daubed her well with honey, and dropped her into the hive prepared for her, and at this present writing, can give no further account of her.

It is plain, however, that Mr. Quinby's plan is not only feasible, but highly to be commended, since, as he says, it removes the only real objection to sending bees by mail. Of course people don't like to have their letters all smeared over with honey. Even *billet-doux* are not improved by such additional sweetness. And we can readily imagine what a fuss particular gentlemen and fastidious ladies will make if their letters are besmeared and bedaubed. Mr. Quinby has demonstrated that this can be avoided, and if it can be, surely it ought to be, for it is the part of good citizenship to avoid giving needless annoyance to one's neighbors.

It is a very great accommodation and advantage to bee-keepers to be permitted to transmit queens through the mails. If handled with due care, nobody need be stung, and the bees will go in perfect safety. We cannot but think that the Postmaster General, on proper representations being made to him, will see the propriety of including bees among transmissable articles. If the proviso were made that they must be sent without honey, and directions given as to the due security of the package, there would be no cause for complaint, and even-handed justice would be meted out to all.

Mr. Quinby would, we think, render an important service to apiculture, if he would carry out his proposal, and send a package of bees by mail to headquarters, preceding it by a communication stating his intention to do so, and explaining the matter in full. If that prove insufficient, the matter should be taken up by Bee-Keepers' Associations, and by the North American Bee-Keepers' Society, and influence brought to bear with a view of securing to apiarians a postal privilege which is exactly similar to privileges extended to parties in other lines of business, and which there is really no valid reason for withholding or withdrawing.

A Curious and Painful Experience.

It is with a particularly reluctant and sheepish feeling that we proceed, under the influence of an imperative sense of duty, and with a view to the diffusion of useful knowledge, to tell our "sperance" in the matter of a bee-sting, lately inflicted upon us by one of those irascible and ill mannered insects, which some people, with misapplied fondness, are wont to call their "pets."

Now, gentle reader, let it be promised, that for some years past, we have regarded a bee sting as a mere bagatelle. We have been stung any number of times, in various places, and of late the effect has been so slightly inconvenient, that we quite set the honey gatherer's dagger at defiance. A sting in any fleshy part of the body was no worse than the prick of a pin, and even a sting in the face caused only transient pain and very little swelling.

But "a change came o'er the spirit of our dream" the other day, "thusly." We were inspecting a hive we had been fitting up for exhi bition purposes the day before, when suddenly, without any note of warning or opportunity to take precaution, a bee buried its sting exactly at the point of the upper lip, right on the little projecting tip of flesh from which the moustache marks its center, and divides to the right hand and the left. "Pretty well aimed," thought we. "Only an Italian could hit the mark like that." We proposed at first to finish our inspection of the hive, and pay no attention to the hurt, further than to pluck out the sting. But in a very few moments, our upper lip felt as if it was on fire, and the pain became very great. We went in doors to look for the blue bag or some washing soda. Found the soda, but it had no effect whatever. The lip swelled very quickly, and the poison extended upwards and downwards, very much after the manner of

little tidal wavelets. Soon our eyes felt fiery and protuberant, and our head was all aglow with fever. Mouth, throat and stomach successively yielded to the subtle virus, until we had to drink cold water to keep from fainting and vomiting. The pain too was excruciating. Before long, we broke out from head to foot in red blotches, and the surface of the skin looked like a case of scarlet fever at its worst stage. There was a strange tingling sensation in the ends of the fingers and toes, as if the virus coursed through the system and oozed out at the extremities. For about an hour our sufferings were intense. Then the pain, swelling and fever gradually subsided, but we were ill all day, and had to lie down about three hours, and might as well been on our back the whole time, for we were fit for nothing when up and around. After a good night's sleep, there was a general sense of weakness and soreness, and a very stiff upper lip. This last we felt the need of in order to persevere in bee-keeping, after the experience of the day before.

Now we want the opinion of older and longer headed apiarians than ourselves, in relation to the circumstance above narrated, and that they may be in position to give it understandingly, we have two or three additional statements to make.

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Is it a mistake to suppose that a bee-sting is 'nothing when you are used to it"? Are there times when the poison of the bee is dangerously virulent? Must bee-keepers pursue their vocation with the knowledge that they are at any time liable to an experience like the foregoing? How many such stings would it take to kill a man? Are there parts of the human body where a bee-sting is in danger of proving fatal?

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Bee Houses.

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Now the want of a bee-house need not deter any one from bee-keeping, and the best advice for such as propose building one, is that given by Douglas Jerrold about getting married: "*Don't.*"

"*Don't*" build a bee-house for the following reasons:—

1. They harbor toads, mice, moths, and other insects.

2. They huddle the hives together so closely that various evils ensue. Young queens on returning from their "bridal tour" are apt to go into the wrong hive, and get killed. In case of a stock becoming excited from any cause, the adjacent hives are pretty sure to become excited also, until the entire apiary becomes infuriated and unmanageable. Robbing is more likely to take place when bees are crowded together. Just as families that live in close proximity to one another, naturally get to know each other's affairs more intimately than they would if at a greater distance apart, so when hives are put close together weakness is discovered, and advantage taken of it. Moreover, bees, like human beings, are less apt to quarrel if they live some little distance apart.

3. There is a more excellent way. A properly made bee-hive is a little house in itself, and is impervious to rain and storm. All that is needed is a partial shade to temper the too violent rays of the sun in the middle of the hot summer day. This can usually be got among the fruit trees of an orchard, or the shade trees of a lawn or shrubbery. One of the best bee-keepers we know practices and recommends the planting of a grape vine beside every bee-hive. This will furnish all the shade required. Care must be taken that the shading be not too dense. A position so chosen that the morning and evening sun will fall full on the hive, while the noon-day blaze is intercepted, exactly meets the case. In such a position the bees will begin work with the first gleam of sunshine, and continue it until the latest beam of the evening. While there will be no cessation of labor because of excessive noontide heat. Set well and widely apart. Each hive is a separate and independent community. With partial shade and a good exposure, the bees will do much better than when made tenants of a bee-house.

We have a bee-house. It was built in the days of our youth and inexperience as a bee-keeper. A pretty site was chosen for it, and it was made rather ornamental, with a nice little cupola on the top, and venetian blinds at the sides for ventilation. It held two tiers of hives, each having an alighting-board and entrance-archway in front of it. We made a fair trial of it, and found it worse than useless. There are no colonies in it now. It has long since ceased to resound with the hum of "the little busy bee." But we find it very useful. It is a most convenient place for storing empty hives, honey boxes, spare frames, the extractor, and all the appurtenances of bee-keeping. Besides accommodating these, it affords room for the garden tools, and the lawn mower. Among other uses it provokes enquiry among visitors. As they note the hives here and there among the trees, and observe that there are none in the bee-house, they very naturally ask for the why and wherefore. Whereupon we discourse to them very much as we have now done to the readers of the *Canada Farmer* in the foregoing article. —*From the Canada Farmer of July* 5, 1873.

Geo. S. Wagner.

Since the post-office department persist in their refusal to permit queens to be sent through the mails, I would suggest to bee-keepers a way of getting around the P. M. G's objections. Send a small piece of comb containing eggs. First, fill the cells containing the eggs with honey, and then pack the comb in a small box securely, just as the comb was placed in for the queen. My father often spoke to me as to the feasibility of transmitting eggs in this manner, and desired to test the experiment, but never did. He thought that the honey would preserve the eggs from spoiling, and would readily be removed by the bees when placed in the hive. It may be that honey would not be needed; actual experiment, however, can alone test that.

Certainly the post-office officials cannot say that they are in danger of being stung by bees *in posse*. And pray, who ever heard of a post-office official being stung by bees *confined* in a queen cage? He would certainly be a curiosity, and should be stored away on the same shelf with those anti-deluvian relicts, the town council of Wenham.

Honey Markets.

CHICAGO.

Choice white comb honey, 25@28c; fair to good, 22@25c.

Extracted, choice white, 12@14c. Fair to good, 10@12c.

Strained, 6@8c.

CALIFORNIA.

Quotations from Stearns & Smith, 423 Front St., bet. Washington and Clay, San Francisco, Cal.

Strained, choice orange blossom honey, from Los Angelos, in 5-gal. cans, 15@16c.

Valley honey, gathered from manna or honey dew, 12@14c.